

In the claims:

Following is a complete set of claims as amended with this Response.

1-38. (Cancelled)

39. (New) A method comprising:

receiving, at a primary node, a plurality of messages to be sent among a group of nodes of a token ring network;

serially sending the plurality of messages among the group of nodes; and

notifying a replica node of each message sent by the primary node among the group of nodes to synchronize sent messages between the primary node and the replica node.

40. (New) The method of claim 39, further comprising in response to the primary node failing, sending to the group of nodes from the replica node, messages in the plurality of messages not sent by the primary node.

41. (New) The method of claim 39, further comprising circulating a token among the group of nodes, wherein the token allows a node to transmit a message.

42. (New) The method of claim 39, further comprising serially sending the plurality of messages among a second group of nodes independently of serially sending the plurality of messages among the first group of nodes.

43. (New) The method of claim 39, wherein each message in the plurality of messages includes a sequence number.

44. (New) The method of claim 43, wherein each sequence number is to impose total order on the plurality of messages.

45. (New) A method comprising:

serially receiving, at a replica node a plurality of messages sent among a group of nodes of a token ring network; and

receiving, from a primary node, a notification of each message sent by the primary node among the group of nodes to synchronize sent messages between the replica node and the primary node.

46. (New) The method of claim 45, further comprising in response to the primary node failing, sending to the group of nodes from the replica node, messages in the plurality of messages not sent by the primary node.

47. (New) The method of claim 45, further comprising circulating a token among the group of nodes, wherein the token allows a node to transmit a message.

48. (New) The method of claim 47, wherein the token is a Totem token.

49. (New) The method of claim 45, wherein the plurality of messages comprise one or more of the following: unicast messages, and multicast messages.

50. (New) The method of claim 45, wherein each message in the plurality of messages includes a sequence number.

51. (New) The method of claim 50, wherein each sequence number is to impose total order on the plurality of messages.

52. (New) A system comprising:

a plurality of nodes connected together as a group in a token ring network to circulate a token among the nodes and to cause a plurality of messages to be serialized among the nodes;

a replica node in the token ring network; and

a primary node in the token ring network to send each of the plurality of messages to the plurality of nodes and to notify the replica node of each message sent by the

primary node to synchronize sent messages between the primary node and the replica node.

53. (New) The system of claim 52 wherein the replica node includes a storage device to store messages received from the primary node.

54. (New) The system of claim 53 wherein if the primary node fails, the replica node sends the messages stored in the storage device to the plurality of nodes.

55. (New) A system comprising:

a plurality of nodes connected together as a group in a token ring network to circulate a token among the nodes and to cause a plurality of messages to be serialized among the nodes;

a primary node in the token ring network; and

a replica node in the token ring network to receive each of the plurality of messages sent to the plurality of nodes and to receive, from the primary node, an indication of each message sent by the primary node to synchronize sent messages between the primary node and the replica node.

56. (New) The system of claim 55 wherein the replica node includes a storage device to store messages received from the primary node.

57. (New) The system of claim 56 wherein if the primary node fails, the replica node sends the messages stored in the storage device to the plurality of nodes.

58. (New) A primary node comprising:

a communications device to connect to a first group of nodes, to receive a plurality of messages, and to serially send the plurality of messages to the first group of nodes; and

a processor coupled to the communications device to generate a notification to be sent to a replica node, via the communications device, wherein the notification includes each message sent by the primary node among the group of nodes, and the notification is to synchronize sent messages between the replica node and the primary node.

59. (New) The primary node of claim 58 wherein the communications device is further to serially send the plurality of messages to a second group of nodes independent of the first group of nodes.

60. (New) The primary node of claim 58 further to synchronize with a plurality of replica nodes.

61. (New) A replica node comprising:

a communications device to connect to a primary node, to serially receive a plurality of messages, and to receive, from the primary node, a notification of each message sent by the primary node among a group of nodes to synchronize sent messages between the replica node and the primary node; and

a storage device coupled to the communications device to store the messages sent by the primary node.

62. (New) The replica node of claim 61 further to send the messages stored in the storage device to the group of nodes if the primary node fails.

63. (New) The replica node of claim 61 further to synchronize with a plurality of primary nodes.

64. (New) A machine-readable medium having stored thereon data representing sets of instructions which, when executed by a machine, cause the machine to:

receive, at a primary node, a plurality of messages to be sent among a group of nodes of a token ring network;

- serially send the plurality of messages among the group of nodes; and
- notify a replica node of each message sent by the primary node among the group of nodes to synchronize sent messages between the primary node and the replica node.
65. (New) The machine-readable medium of claim 64, further comprising in response to the primary node failing, sending to the group of nodes from the replica node, messages in the plurality of messages not sent by the primary node.
66. (New) The machine-readable medium of claim 64, further comprising circulating a token among the group of nodes, wherein the token allows a node to transmit a message.
67. (New) The machine-readable medium of claim 66, wherein the token is a Totum token.
68. (New) The machine-readable medium of claim 64, wherein the plurality of messages comprise one or more of the following: unicast messages, and multicast messages.
69. (New) The machine-readable medium of claim 64, wherein each message in the plurality of messages includes a sequence number.
70. (New) The machine-readable medium of claim 69, wherein each sequence number is to impose total order on the plurality of messages.
71. (New) A machine-readable medium having stored thereon data representing sets of instructions which, when executed by a machine, cause the machine to:
- serially receive, at a replica node a plurality of messages sent among a group of nodes of a token ring network; and

receive, from a primary node, a notification of each message sent by the primary node among the group of nodes to synchronize sent messages between the replica node and the primary node.

72. (New) The machine-readable medium of claim 71, wherein the sets of instruction, when executed by the machine, further cause the machine to in response to the primary node failing, send to the group of nodes from the replica node, messages in the plurality of messages not sent by the primary node.

73. (New) The machine-readable medium of claim 71, wherein the sets of instruction, when executed by the machine, further cause the machine to circulate a token among the group of nodes, wherein the token allows a node to transmit a message.

74. (New) The machine-readable medium of claim 71, wherein the sets of instruction, when executed by the machine, further cause the machine to serially send the plurality of messages among a second group of nodes independently of serially sending the plurality of messages among the first group of nodes.

75. (New) The machine-readable medium of claim 71, wherein each message in the plurality of messages includes a sequence number.

76. (New) The machine-readable medium of claim 75, wherein each sequence number is to impose total order on the plurality of messages.